

(12) **United States Patent**
Chatterjee et al.

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(54) **SIGNAL DESIGNS FOR D2D SUBFRAMES**

(56) **References Cited**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 47 days.

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(21) Appl. No.: **14/498,276**

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(57) **ABSTRACT**

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Embodiments of the present disclosure describe apparatuses and methods for signal designs for device-to-device (D2D) subframes. Various embodiments may include a UE with a radio transceiver to communicate with another UE via D2D communications. The UE may further include processing circuitry to generate a cyclic prefix (CP) for a first or second symbol of a D2D subframe at an orthogonal frequency division multiplexing (OFDM) resource block or a single-carrier frequency-division multiple access (SC-FDMA) resource block. Other embodiments may be described and/or claimed.

(52) **U.S. Cl.**
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(58) **Field of Classification Search**
CPC ... H04W 28/02; H04W 72/042; H04W 72/04; H04W 56/0005; H04W 72/0406; H04L 5/0053

See application file for complete search history.

16 Claims, 13 Drawing Sheets

